Teaching And Learning

UNIT-I PROCESS OF LEARNING

-: CONCEPT OF LEARNING :-

- Learning is an important phase of human life.
- It is a long life process as learning never ends.
- It is the growth of the adaption of behaviour to a wide variety of situations and circumstances.

Definition :-

A number of ways are used for explaining and defining the term "Learning".

I Munn "Learning is more or less permanent incremental modification of behaviour through experience."

II. Crow and Crow "Learning involves the acquisition of knowledge, habits and attitudes."

III. Skinner "Learning is both acquisition and retention."

IV. Gates :"Learning is modification of behaviour through experience."

V. Deniel Bell : " Learning is modification due to energies of organism and the environment impinging on the organism itself."

VI. View of Thorpe : "We can define learning as that process which manifests itself by adaptive changes in the individual's behaviour as a result of experience."

VII. G.A. Kimble's :" Learning refers to more or less permanent change in behaviour which occurs as a result of practice.

IX. Kingsley and Garrey :" Kingsley and Garrey emphasise that the act of adjustment to environment is the process of learning.

The process of learning includes the following :-

(a) Acquisition of new experiences.

(b) Retention of old experiences in the form of impressions, engrams or skills.

(c) Development and modification of experience.

(d) synthesis and organisation of the old and the new experiences.

"Learning is the acquisition of knowledge, habits and attitudes. It involves new ways of doing things, and it operates in an individual's attempt to overcome obstacles or to adjust to new situations."

GENERAL CHARACTERISTICS OF LEARNING

The following are the general characteristics of learning:

1. Learning is progressive change in behaviour
2. Learning is adjustment
3. Learning is growth
4. Learning is organising experience.
5. Learning is continuous.
6. Learning is purposeful.
7. Learning is need based.
8. Learning is universal.
9. Learning is active.
10. Learning is intelligent and creative.
11. Learning affects the conduct of learners.
12. Learning is the product of the environment.
13. Learning is transferable.

PRINCIPLES OF LEARNING:

1. Learning is a fundamental process of life. Without it, life cannot exist and no progress can take place.
2. Learning affects all modes of behaviour, may be skills, knowledge, attitudes personality, motivation fear, mannerism etc.

(3) Learning is a continuous process. It starts from birth and continues till death.

(4) Learning is purposive or goal directed. It is not an aimless activity.

(5) Learning is change in response or behaviour, may be favourable or unfavourable.

(6) Learning generally involves some degree of permanence.

(7) Learning is caused partially or wholly by experience.

(8) Learning is determined by conscious as well as unconscious experiences. It occurs intentionally or unintentionally on the part of the learner.

(9) Learning is process of change not a product in the form of changes behaviour.

(10) Learning takes place when an organism reacts in a situation.

(11) Learning is the result of individual's activity.

(12) Learning is a creative experience.

(13) Learning is universal. Both animals and human beings are subjected to learning. Man learns more than the animals.

(14) Learning is total reaction of the individual to total situation.

(15) Learning can be transferred. Material learned learned in one situation can be utilized in other similar situation also.

(16) Learning is process not a product. Attitudes, fears gestures, motor skills, language skill etc.

(17) Learning is motivated.

(18) Learning takes place in both formal and non-formal situations.

(19) Learning is multiple like verbal skill, motor conceptual perceptual.

(20) Learning may be right or wrong. desirable or not desirable.

TYPES OF LEARNING

Gagne has classified learning into eight types in hierarchical order. They are

1. Signal learning
2. S-R learnig
3. Chain learning
4. Verbal Associate learning
5. Multiple Discrimination
6. Learning of concepts
7. Learning of principles
8. Problem solving

①Signal Learning: -

- it is commonly termed as "classical conditioning".
- The classical conditioning was developed by Russian psychologist (Pavlov'.
- In classical stimulus unconditioned stimulus (food) and conditioned stimuli (sound of the bell) are paired togather and presented to the dog a number of times. with the result that when the sound of bell presented to the dog it secret saliva.
- This modification of behaviour of causing salivation to the sound of the cell is called conditioning.

②S-R Learning-

S - Stimuli -

R - Response

Edward Thorndike's puzzle box Experiment on cat

(Describe the Experiment)

"Response that produce a satisfying effect in a perticular situation become more likely to occur again in that situation.

Responses that produces a discomforting effect become less likely to occur again in that situation.

③ Chain learning:

There are two type of chain
①Motor ⑪ verbal

- It occurs when the learner is able to connect two or more previously learned stimulus-response into a linked order.

④ Verbal Associate learning

S ⟶ [R] S · R
object observing Doll Doll

A child is shown an object as a doll. The next time if he see the particular object he will be able to say that it is a doll.

⑤ Multiple Discrimination

When the behaviour shows a specificity when the ~~behaviour shows~~ of response to one given stimulus to the exclusion of others, we may say that disscrimination has taken place.

- Discrimination involved higher mental process and solve problems.

⑥ Learning of concept:

we form concept by finding properties which a group of object share in common.

Scanned with OKEN Scanner

⑦ Learning of Principle:-

- Principle shows regular relationship among two or more concepts.
- most of the classroom learning contributes to the development of principles.

⑧ Problem solving:-

- Problem solving comes at the highest stage in the hierarchy of learning process.
- It depends on learning of rules and abstract reasoning.

Satyam Education

LEARNING PROCESS: ATTENTION, SENSATION, PERCEPTION AND CONCEPT FORMATION

Attention is an important aspect of our mental activity and plays useful role in our day-to-day life. in the teaching learning process, attention is the major source of learning.

Definitions :-

The phenomenon of attention has been defined variously.

(i) "Attention is the process of getting an object of thought clearly before the mind." - Ross

(ii) "Attention as the selective act of consciousness. It is the selective activity of the mind." - Rex and knight

(iii) "Attention as concentration of mind. This "concentration" is again selective and implies "sensible clearness" as ticher also describes attention - Wood-worth and Shlosberg

(iv) From another point of view attention is "bringing into focus an idea or an object from the margin." This also implies selectivity.

Characteristics of Attention :-

(i) Attention is selective.

(ii) Attention is constantly shifting from one object to another.

(iii) Attention implies knowing, feeling and doing.

(iv) Attention his motivated by some purpose in the object or activity which we attend to.

(v) Attention has a narrow range. we attend to one thing at a time.

(vi) Attention is generally aroused by new stimuli.

(vii) Attention is accompailed by motor adjustments.

Kinds of Attention :-

1. Non-voluntary Attention
   (i) Non-voluntary spontaneous Attention
   (ii) Non-voluntary forced Attention
2. Voluntary Attention
   (i) Voluntary Effortful Attention
   (ii) Voluntary Effortless Attention

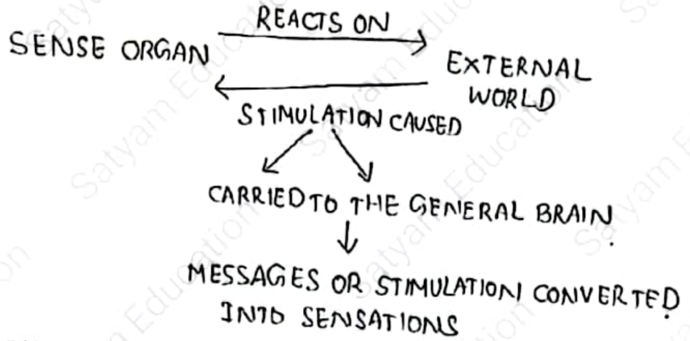
How to Secure Atention?

Scanned with OKEN Scanner

SENSATION

Man is blessed with a number of sense organs. These organs help him to see, hear, taste, touch and smell. The sense organs receive impressions of the things found in the outer world. These impressions are known as 'Sensations'.

Sensation as a mental process can be diagrammatically explaine as under :



CHARACTERISTICS OF SENSATION :

The Following are the major characteristics of Sensation:

(a) Quality
(b) Intensity
(c) Duration
(d) Extensity

KINDS OF SENSATION :

1. Visual Sensation :

The eye is the organ of our sensation of sight. It occupies the first place among the sense-organs and is called "the queen of senses".

- The visual sensation occupies the highest place among sensations. It is the most refined sensation. It is important to mark two sensations and belong to the most primitive and earliest sensations.

2. Auditory sensation :

The ear is the organ of our auditory sensations. The stimulus for sound sensation consists of the vibration or motion in the particles of air.

The ear consists of three parts.

(i) The external ear
(ii) The middle ear
(iii) The inner ear

3. Olfactory (Smell) sensation :

The nose is the organ of smell. The appropriate stimuli for the sensation of smell are the gaseous substances included in the air. The olfactory nerve in the upper cavity of the nose plays an active role in smell sensation.

Satyam Education

4. Gastutory (Taste) sensation :-

The tongue is the organ of taste. The sensation of taste can be stimulated only by fluids. Solid objects must first dissolve themselves before they can produce any taste-sensation. At the back of the tongue there are taste buds each of which contains a number of test cell.

5. Tactual or Culaneous (Touch) sensation :

The skin is the sense-organ which causes the sensation of touch. The stimulus for touch is pressure upon the skin, adjacent to touch corpuscle, resulting in a pushing of the skin inwards or a pulling of it outwards.

PERCEPTION

Perception belongs to the knowing experience, it is congnitive process. It consists in our cognition or knowledge of objects.

Perception = Sensation + Meaning

Defination:

1. Woodworth's perception is the process of getting to know objects and objective facts by the use of senses.

Scanned with OKEN Scanner

TRANSFER OF LEARNING

The term transfer or transfer of training has been defined by experts. In simple words, transfer of training means that learning or training in one field or fields is transferred to the other field or subject.

TYPES OF TRANSFER OF LEARNING

There are three forms of Transfer of Training.

1. Positive Transfer
2. Negative Transfer
3. Zero Transfer
4. Bilateral transfer

THEORIES OF TRANSFER OF LEARNING

The following are the four important theories of transfer :

1. Theory of Identical Elements (Thorndike)
2. Theory of Generalisation of Experience (Judd)
3. Theory of Ideals of Procedure.
4. Configuration or Transposition Theory (Gestalt)

MOTIVATION - CONCEPT

Bernand defines motivation as, "the stimulation or action towards a particular goal where previously there was little or no attraction towards that goal."

Characteristics of motivated behaviour:
1. motives originate and energize behavior.
2. Motives sustain behaviour.
3. Motives direct behaviour

TYPES OF MOTIVATION

1. Natural Motivation (intrinsic or primary motivation)
2. Artificial motivation (extrinsic or secondary motivation)

Thorndike's Puzzle Box Experiment:

Trial and Error Theory

This theory was put forwarded by an American psychologist.
E.L Thorndikes

Meaning of this theory:

Thorndike says the learning is the bond connection i.e formation and strengthening of natural connections between stimulus and Responces.
- The connection are illustrated by the symbol [S-R]. S-Stimulus
R-Response

Scanned with OKEN Scanner

- This theory also known as "Bond theory of learning.

Thorndike has written -
"Learning is connecting and mind is the many connection system."

- Thorndike says we learns by making trial and making errors many times and making further trails, eliminating the wrong responces.

eg. A cyclist learns cycling after good amount of trial and error of the balance.

learning is to makes alot trial

→ Some does not give satisfactory result

→ Some give satisfactory result

Thorndike puzzle box Experiment

[a hungry cat was placed in the box]
↓
[Puzzle box]
↓
[Fish]

Satyam Education

The most accepted and fundamental laws of learning

① Law of exercise

② Law of Effect

③ Law of rediness

① Law of Rediness

- Primary law of learning
- Readiness means is 'preparation of action'.
- If some one feels ready to learn or to act he learn more effectively than when not ready.
- So it implies that the learner must mentally prepared for the learning for better result.

② Law of Exercise

- This is second law of exercise /trial error theory.
- The law implies the learning takes place by excercising i.e by doing.
- This is also called as "law of use and law of disuse."

Scanned with OKEN Scanner

(a) Law of use:-

when conection is made between a situation and a responce, that connection's strength is increased.

(b) Law of disuse:-

Connection not made between a situation and a responce.

③ Law of Effect:-

- The third low of learning
- If our efforts accompained by a feeling of satisfaction. we are further inspired to learn, satisfaction is strengthning the connection.
- where as dis-satisfaction is weaken the connections.
- law of effect signifies that if the responses satisfy the subject, they are learn and accepted.

While those which are not satisfying are eliminated.

CLASICAL CONDITIONING THEORY

① Pavlov's Classical Conditioning

- Experiment Performed on dog.
- observer was hidden
- Food given through Automatic Devices.
- Salivary glands were operated & connected with tubes to collect the saliva.

NS ⟶ NR

- Natural Stimulus ⟶ Natural Responce (Salivation)
  (Food + Bell (associated))
  ↓
  Substituted by Artificial stimulus (Ringing of Bell) ↗ (Salivation)

- Principle of Association & Substituation
- Natural Stimulus ⊕ Artificial Stimulus
  Association
  ↓
  Natural Response
- Natural Stimulus ⟶ Artificial Stimulus
  Substituation
  ↓
  Natural Response

Scanned with OKEN Scanner

Skinner's Operant Conditioning theory:

- Experiment done with Rats and pigeon.
- Special Apparatus - Skinner's Box.
- It is arranged that when a rat (hungry or thirsty) presses the level. the feeder mechanism is activated a light or special sound is produced be a small pallet of food or water is releted in to food cup.

Experiment with pigeon:-

To teach the pigeon walk in figure eight, Skinner watched its activity in box and gave it a small amount of grain for proper movement.

⇒ R. Conditioning or response conditioning as the emphasis on response.

- learning of operant behaviour.
- Attempts are made to share the behaviour
- Reinforcement is given (like food) for proper response.
- Here, Appropriate behaviour is achieved by a chain of response through a step by step process called Shaping.

Satyam Education

FACTORS INFLUENCING LEARNING

- There some agents/factors which have direct interference with learning.
- The teacher while intending any kind of learning upon his pupils aware of these factors. otherwise He would not get the expected result.
- while class room learning it is influenced by a number of factors.

These factors are classified in three broad factor i.e influcing learning

① **Physiological factor :—**

(i) The organism and perception (ଅନୁଭବ)
(ii) organic defects (ଶାରୀରିକ ତ୍ରୁଟି)
(iii) Fatigue (କ୍ଲାନ୍ତି / ଅବସାଦ)
(iv) Time of day and learning
(v) environmental conditions
(vi) Drugs . Alcohol, coffine, tabacco
(vii) Age
(viii) Motivation
(ix) inteligence

② **The Pedagogic Factor :—**

Use of method in learning

Scanned with OKEN Scanner

③ **Environmental Factors : -**

- The environment to which the individual belongs has profound impact on individuals learning.
- conductive and congenial environment where the individual gets satisfaction of his biological urges like aquisition, manipulation independence etc ensures proper learning.

④ **Motivation Factors : -**

It is a stant reality that we can not make a horse drink by dragging it to the drink of water unless it intends to do so.

→ Motivation is so highly sought for any individual in any activity.

→ so as long as the learner is not properly motivated towards learning all our attemps to have it on him will fail.

- So, it is most important to arouse intrest in the learner.

⑤ **Personal Factor : -**

- certain physical deformities (ବିକୃତି) also obstruct (ବାଧା ଦେବା) the learner's pace of learning.
- when things do not turn as per the intention and desire of the individual. He also face trouble in learning.

Satyam Education

Ⓒ Maturational Factors :-

- Maturation plays a prominent role in learning.
- without attainment of a definite maturation level an individual can not learn the motivating environment.

eg - A child can not skip.

As there is no intelligence development the individual can not perceive or understand relatively complex issues and situation etc.

Satyam Education

Behaviorist Perspectives of Learning :-

TRIAL AND ERROR THEORY :-

→ This theory was put forward by an American Psychologist, E.L. Thorndike.

→ According to him - learning is a matter of bond connection i.e the formation and strengthening of natural connections between situations and responses.

→ These bond connections are formed through trial and error.

→ This means that we learn by making trials, making errors or mistakes during the trials and making further trials, eliminating the wrong responses.

→ Thus learning take place gradually by the process of trial and error.

Thorndike's Puzzle Box Experiment :-

→ Thorndike studied the character of trial and Error learning in a number of experiments on cats.

→ The use of a specially designed puzzle box shown below was a favourite device with him.

→ In one of the experiments, a hungry cat was placed in the box and the door was closed.

→ A fish was placed outside the box.

→ The cat was given 100 trials, ten each morning and ten each afternoon for five days.

→ The cat was fed at the end of the each experimental period.

→ ~~at after opening~~ the d..

→ Afterwards she was given nothing more to eat until the next session.

Scanned with OKEN Scanner

→ If after opening the door in any trial by jumping or by chance, she rushed immediately to the food, she was allowed only a small cask.

→ A complete record of the cat's behaviour during each trial was registered.

The basic principles are :-

(1) Bond connection :-

All learning is a matter of bond connection. i.e strengthening of connections between situations and responses.

(2) Stimulus as Motive :-

The stimulus may be in the form of motive, needs or desire to attain the goal; this impels the individuals for action.

→ Learning is a fundamental ingredient in the education of a child.

The most accepted and fundamental laws of learning are.

1. Law of Exercise
2. Law of Effect
3. Law of Readiness.

1 Law of Exercise :-

→ This law implies that learning take place by exercising, i.e, by doing or actively participating in the performance.

→ We learn what we do, and we do not learn what we do not do.

→ That is why this law is also called "Law of use" and "Law of Disuse")

Scanned with OKEN Scanner

(a) Law of use :-

When a modifiable connection is made between a situation and a response, that connection's strength is increased. This emphasis the need and importance of practice. In other words "Practice Makes Perfect".

(b) Law of Disuse :-

When a modifiable connection is no made between a situation and a response over a length of time, that connection's strength is decreased'. This law implies the negative value of lack of perfect

(2) Law of Effect :-

→ This law implies that if our efforts are accompained by a feeling of achievement or satisfaction, we are further inspired to learn, and therefore, effective learning take place.

→ If our efforts are not accompanied by a feeling of satisfaction, not much of real learning will take place.

Distinction between classical conditioning and operant conditioning :-

Classical Conditioning :-	Operant conditioning :-
1. classical condition given by I.P Pavlov is respondent conditioning involving elicited responses.	1. Operant conditioning given by B.F skinner involves operant or emitted behaviour.
2. The elicited response is made to known stimulus.	2. Response is emitted and there is no known stimulus to which response is made.
3. stimulus plays a dominant role for producing desired behaviour. it is S—R conditioning	3. Response plays a dominant role in learning desired behaviour. this is R—S condition

Scanned with OKEN Scanner

4- Generally it is controlled by autonomic nervous system of the organism.	4- It is controlled by the central nervous system of the organism.
5- stress is laid upon the time factor.	5- stress is laid upon the reinforcing stimulus that follows it.

Satyam Education

UNIT-3

Cognitive and Humanist Perspective of Learning :-

* Insightful learning theory (Kohler) :-

→ Wertheimer, Koffka, and Kohler are the founders of Gestalt school of psychology.

→ They stressed the role and importance of a more wholistic, cognitive approach to learning, Kohler proposed the sudden grasping or understanding of meaningful relations.

→ Learning is not merely a habit formation with a multitude of S-R (Stimulus Response) connection.

→ This proves that the whole is more important than the parts.

→ So learning also takes place as a whole.

→ This theory implies that in the act of learning, we try to grasp the whole situation and then act accordingly to find out the best solution.

* Theory of Instruction or Discovery Learning (Bruner)

→ Jerome S. Bruner developed a cognitive model of learning theory is a generalised theory about learning.

→ His main concern with the means by which people actively select, retain and transform information.

→ This theory explain how the matter to be taught can best be learned.

→ A theory of teaching or instruction essentially provides the teacher with a theoretical frame work for conducting instruction to gain maximum +ve results.

Bruner gives Emphasis on three points :-

(a) The nature of persons as knower.
(b) The structure of knowledge.
(c) The nature of the knowledge acquisition process.

Educational Implications of Bruner's Theory :-

→ Building & Maintaining predispositions required of learners, the structure of knowledge, the sequencing of instructional experiences and reinforcement in preparing curriculum be considered in all academic activities.

→ A team approach be employed for examining these aspects.

→ Teachers should make all instruction 'student oriented'.

→ Teachers should try to make teaching-learning situation more 'process'-oriented rather than product-oriented.

→ Teachers should use appropriate reinforcement techniques like K-R (knowledge of results) etc.

→ Teacher should plan their teaching in such a way so that students get opportunities to develop their basic intellectual skills e.g. making inference on the basis of minimum information etc.

* Cognitive Approach to Learning (CF) (Development) theory of learning (PIAGET) :-

→ In the cognitive approach, learning is considered as inner psychological functioning such as perception, concept formation, attention, memory and problem solving.

The major assumptions of cognitive approach are:

→ Learning is an active process involving change in the cognitive structure.

→ Learning requires cognitive effort and accurate concepts of understanding.

Scanned with OKEN Scanner

→ learning is adaptation of knowledge to bring in balance between self and environment.

Concept :-

→ The word "cognition" is derived from the latin word cognoscere which means to know, or to perceive.

→ cognitive theories discuss how people gain an understanding of themselves and their environment and how, in using this, they act in relation to their environment.

→ According to cognitive theorists, teaching is a process of developing an insight in the learner.

→ Cognitive approach emphasizes and gives importance to cognition in learning.

The Main characteristics of the cognitive approach are :-

→ Earlier cognitivists gave more emphasis on insight while the modern cognitivists place more importance on the human mental process.

→ In the cognitive approach, learning is considered as an active and dynamic process.

→ The cognitive approach is represented by a dynamic system.

→ The learner is purposive and interacting within the field of their goal.

→ It is the most suited for concept formation, problem solving and other higher mental process.

→ Perceptions are vital in forming mental maps and associating between problems and their solutions.

Scanned with OKEN Scanner

Limitation of Piaget's Approach:-

1. Piaget does not seem to make his terminology very clear to him reader.

2. He is too preoccupied with numerous epistemological considerations.

3. Piaget's entire work lacks scientific methodology as conventionally understood.

4. His more emphasis is on concepts of relationships and he does not investigate nominal concepts.

5. It is lengthy and time consuming.

6. No direct teaching is involved.

7. Mathematics and sciences can not be applied in early childhood.

* Social Development theory "ALBERT Bandura":-

Biographical sketch of Bandura:-

→ Bandura was a canadian psychologists born in 1925 in the province of Alberta.

→ During his schooling, he interacted only few children as the class consults of 20 students.

→ He attained the university of Colombia as an undergraduate.

→ He studied psychology from the university of Iowa, USA and graduated in it.

Basic concepts :-

Bandura proposed a new ~~technology~~ technique of learning called observational learning also called as Modeling.

- **OBSERVATIONAL LEARNING CONSISTS OF 4 STAGES OR COMPONENTS :-**

Stage I :- Attentional processes :-

Attention :- Concentrating on one particular stimuli rather than a group of stimulus.

→ Imitating a model is not possible without attention.

→ Models are distinctive and attractive due to which the individuals pay attention to them.

→ Attention also is governed by psychological characteristic of observers such as their needs and intervals.

Stage - II :- Retention Processes :-

Retention :-

→ Restoring or remembering the action is symbolic from.

→ We remember Bandura thinks of symbolic processes in terms of stimulus continuity (Association among stimuli that occur together)

Stage - III :- Motor reproduction processes (performance) :-

→ To reproduce behaviour accurately, the person must have the necessary motor skills.

Stage - IV :- Re-inforcement & Motivational processes (Consequences)

→ One can observe a model and thereby, acquire new knowledge, but one may or may not perform the responses.

Scanned with OKEN Scanner

Scanned with OKEN Scanner

→ Performances are covered by re-inforcement and motivational variables, we will actually imitate and then if we are likely to gain a reward.

→ Performances are also influenced by various re-inforcement Learning to imitate the behaviour or in some where model themselves after other.

→ Performances are partly governed by self-re-inforcement.

Models can influence four kinds of behaviour :-

a) Aggression

b) Sex roles

c) Patterns of self re-inforcement.

d) Pro-social behaviour.

* Traditional classroom and the constructivist classroom (ii) :-

The traditional classroom	The constructivist classroom
→ Begins with parts of the whole - Emphasizes basic skills.	→ Begin with the whole - expanding to parts
→ strict adherence to fixed curriculum	→ pursuit of student questions interests.
→ Textbooks and workbooks.	→ Primary sources/manipulative materials
→ Instructor gives/students receive.	→ Learning is interaction - building on what students already know
→ Instructor assumes directive, authoritative role.	→ Instructor interacts/ne[gotiates] with students.
→ Assessment via testing/correct answers	→ Assessment via student w[orks], observations, points of vi[ew], tests, Process is as import[ant as] product.
→ knowledge is inert.	→ knowledge is dynamic/chan[ging] with experience.
→ students work individually	→ Students in group socially

Humanistic approach to Learning or Learner centered Approach (Carl Rogers) :-

→ Humanists think of learning as the way in which the individual develops his unique way of controlling his environment and attaining his best potential.

→ Humanistic approach is based on humanism, which is a philosophy of human beingism, concerned with human and humane interests not supernatural belonging to human being and not to external nature, realising a human being to his greatest potential or giving him, as a human being, his greatest satisfaction.

Concept :-

The term humanistic originates from humanism which has been derived from the Latin word Home means human being thus humanism is the philosophy in which the human being occupies a central place.

Characteristics :-

→ It is concerned with the welfare of all human beings.

→ It believes in co-existence.

→ It considers the best learning as based on truth, good and beautiful.

→ It believes that learning becomes effective when it is need-based.

→ Learning is experienced based.

→ It emphasizes on self-motivation for better learning.

→ To increase the learners self direction and independence.

→ It helps students take more responsibility for determining what they are learning.

→ It increases learner's reactivity

→ It develops an interest in the art and fosters creativity